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Applicants	:	Chong Seng Cheng Teng Pin Poo	
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APPEAL REPLY BRIEF

This is Appellants' Reply Brief (in an appeal pursuant to 37 C.F.R. §41.37) to Examiner's Answer to Appellants' Appeal Brief filed on April 18, 2007 in the above-identified application.

(1) REAL PARTY IN INTEREST

As identified in Appellants' Appeal Brief filed on April 18, 2007, the assignee, Trek Technology (Singapore) Pte. Ltd., of Appellants, Chong Seng Cheng and Teng Pin Poo, is the real party of interest in the above-identified U.S. Patent Application.

(2) RELATED APPEALS AND INTERFERENCES

As mentioned in Appellants' Appeal Brief filed on April 18, 2007, there are no other appeals and/or interferences related to the above-identified application at the present time.

(3) STATUS OF CLAIMS

As mentioned in Appellants' Appeal Brief filed on April 18, 2007, claims 1-21 have been cancelled. Claims 22-30 have been rejected. Claims 22-30 are on appeal.

(4) STATUS OF AMENDMENTS

As mentioned in Appellants' Appeal Brief filed on April 18, 2007, there is no new amendment to claims 22-30 at the present time.

(5) SUMMARY OF CLAIMED SUBJECT MATTER

Examiner disagrees with Appellants' general characterization of the claimed device as a portable data storage device functioning like a magnetic disk or CD that plugs directly into a computer's USB port. Examiner also states that direct connection without a cable and magnetic disk or CD like capacity/functionality are new matters not disclosed in the original specification. Appellants respectfully traverse.

Examiner states that Appellants cannot provide a concise explanation of the subject matter defined in the independent claim with reference to the specification by page and line numbers. Appellants respectfully disagree and hereby provide (again) such concise explanation of the subject matter defined in the independent claim with reference to the specification by page and line numbers as follows.

Regarding the disclosed unitary portable storage device and the non-removable feature, Appellants have repeatedly provided page and line numbers showing support in Appellants' specification. Throughout the entire specification, the disclosed device is shown as a single, whole and non-separable device 10 in Figure 1 and is always referred to as "a portable data storage device" or "the portable storage device" in the ***singular*** form. *See, e.g.*, p. 1, ll. 3 – 4, ll. 24 – 25; p. 2, ll. 8 – 9; p. 3, ll. 12, 15 – 20 and 22; and p. 4, ll. 21.[1] One

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[1] The term "a" used throughout the entire specification in reference to the device 10 suggests that its elements are all part of the unitary and integrated device with no user-removable component. *See North Am. Vaccine, Inc. v. American Cyanamid Co.*, 7 F.3d 1571, 1575-76 (Fed. Cir. 1993) (where there is no indication in the patent specification that the inventors intended the term "a" to have other than its normal singular meaning it was proper to limit the claims to a ***singular*** device). *See also Abtox, Inc. v. Exitron Corp.*, 122 F.3d 1019, 1023-24 (Fed. Cir. 1997) (*opinion amended on other grounds*) (use of the article "a" in connection with the element "metallic gas-confining chamber" suggests a single chamber, and repeated

(continued...)

passage in Appellants' specification, "[i]f the installation of the software is complete, . . . *the device 10 may then be removed [] from the USB socket* on the computer" (italics supplied), describes the entire *device 10* as being removed from the socket in one single motion. *See* p. 7, ll. 19-22. A skilled artisan, reading these disclosures, alone or together, would clearly understand that the inventors had possession of a unitary and integrated device in which the USB plug is integrated into the unitary portable data storage device without an intervening cable or removable memory. Appellants, by (i) disclosing the claimed device's singular nature and (ii) never mentioning any removable or non-integrated component, have fully met their burden of "convey[ing] to persons skilled in the art that the inventor had possession of the subject matter in question[,]" *i.e.*, a ***unitary*** portable storage device with all parts integrated and ***non-removable***. *See Fujikawa*, 93 F.3d at 1570; *Fiers*, 984 F.2d at 1170; *see also In re Kaslow*, 707 F.2d at 1375; *see also Vas-Cath*, 935 F.2d at 1563-64. In addition, Appellants respectfully submit that a device ***designed*** to include ***multiple*** non-integrated or user-removable ***components*** during the device's ***normal course of usage*** will not be understood by a skilled artisan as a **single** or **singular** device (as multiple components are by definition not single or singular). This further supports Appellants' position that claims 22 – 29 are fully supported by the specification as required under 35 U.S.C. § 112, first paragraph in terms of "**unitary**" and "**non-removable**."

In addition, a skilled artisan would understand that the employment of a Philips D12 component for device 10 in Figure 1 of Appellants' specification would result in the USB plug and the D12 component being integrated on the same printed circuit board (PCB). *See* para. 22 on pp. 10-11 of *Hyde Affidavit*; *see also* para. 19 of *Kim Affidavit*. Also, a skilled

(continued)
references to "said chamber" in various portions of the device are described in the claim reinforces the ***singular*** nature of the chamber).

artisan would understand that, unlike certain types of memory chips that are intended to be removable from the device in which the chips are installed, flash memory chips are fixedly installed within a device and are "non-removable" under normal usage of the device. *See* para. 28 on p. 7 of *Kim Affidavit*. These further support Appellants' position that the specification teaches a unitary portable storage device with an integrated USB plug and a non-removable flash memory.

As further evidence that the present invention discloses a unitary, integrated portable memory device with non-removable parts, the specification discloses a "portable data storage device . . . which does not include ***moving parts*** . . . ." (emphasis added) in lines 8-10 on page 2 of Appellants' specification. That is, the specification supports a portable data storage device designed to contain no part that moves relatively to other part(s).[2] If the USB plug is not "integrated" and is instead coupled to the rest of the device through an "intervening cable," then clearly the flexibility of the cable will allow the USB plug to move around and hence results in at least one part that moves relatively to other part(s). Likewise, if the memory is not "non-removable" and instead can be separated from the rest of the device by a user during the device's normal course of usage, then clearly the mobility of the memory during and after being separated by the user results in at least one part that moves relatively to other part(s). These situations, as would be understood by a skilled artisan, will directly contradict the clear disclosure of a "portable data storage device . . . which does not include ***moving parts*** . . ." and hence will not be permissible under Appellants' specification.

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[2] The specification discloses a "portable data storage device . . . which does not include moving parts ***or*** require a mechanical drive mechanism to read data from the data storage device" (emphasis added) in lines 8-10 on page 2 of Appellants' specification. That is, the claimed invention does not (1) include moving parts ***or*** (2) require a mechanical drive mechanism (that may also contain moving parts) to read data from the data storage device.

As a result, for at least the forgoing reasons, Appellants have clearly and reasonably conveyed to those skilled in the art that Appellants were in possession of a ***unitary*** portable data storage device that includes a ***non-removable*** memory.

Regarding the disclosed integrated USB plug that plugs directly to a computer without an intervening cable, Appellants' specification undisputedly discloses a USB plug that is plugged into a USB socket on a computer, **with which Examiner agrees**. *See* p. 5, ll. 18-21 and Figure 1 of Appellants' specification; *see also* p. 11 of the 5-26-2005 Office Action. Appellants, by (i) disclosing a USB plug plugged into a USB socket on a computer and (ii) never disclosing, teaching or suggesting the use of a connecting cable, have fully met their burden of "convey[ing] to persons skilled in the art that the inventor had possession of the subject matter in question[,]" *i.e.*, a portable storage device with a USB plug capable of being **plugged directly** into the USB socket on a computer **without an intervening cable**. *Fujikawa*, 93 F.3d at 1570; *Fiers*, 984 F.2d at 1170; *In re Kaslow*, 707 F.2d at 1375; *see also Vas-Cath*, 935 F.2d at 1563-64. The reason is that, as a skilled artisan would understand, the "USB socket on a computer" disclosed in Appellants' specification must be an "A"-type socket under the USB Specification because a computer is a "host system." *See paras.* 16-17 of *Kim Affidavit*; *see also* pp. 73-74 of the *USB Specification Revision 1.1* attached to *Kim Affidavit*. As a skilled artisan would also understand, because Appellants' specification discloses a USB plug that is plugged into such "A"-type socket on a computer (as agreed by Examiner), Appellants' disclosed USB plug must necessarily be an "A"-type plug under the USB Specification as well. *See id.* Furthermore, when the USB plug disclosed in Appellants' specification is plugged into the USB socket on a computer (as agreed by Examiner), such USB plug is **plugged directly** into the USB socket on the computer **without an intervening cable** (as demonstrated by an illustrative figure in paragraph 16 of *Kim Affidavit*, reproduced as Figure 1 below on p. 6 of this paper) because an intervening cable

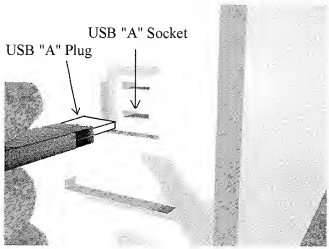

Figure 1. A USB "A"-type plug would plug directly into a USB "A"-type socket.

between a USB plug and a USB socket is not allowed under the USB Specification (as explained below). *See* para. 17 on pp. 8-9 of *Hyde Affidavit*; *see also* paras. 16-17 on pp. 4-5 of *Kim Affidavit*. Consequently, Appellants' claims are fully supported by the specification in terms of "**plugged directly**" and "**without an intervening cable**."

Regarding Examiner's concern of a possible intervening cable between the USB plug of the claimed invention and the USB sock on a computer, Appellants respectfully submit that this possibility does not exist here since such intervening cable is not permitted by the USB specification at the time of the invention. The USB Specification defines the types of cables that are allowable under the Specification. At the time of the invention, the USB Specification specified only permissible plugs at both ends of a USB cable. *See* para. 17 on pp. 8-9 of *Hyde Affidavit*; *see also* pp. 73-74 of the *USB Specification Revision 1.1* attached to *Kim Affidavit*; *see also* Figure 2 below on p. 7 of this paper. As would be understood by a skilled artisan, the USB Specification did not allow an intervening cable between a USB plug and a USB socket, which would necessarily (and impermissibly) require a USB plug at one end of the cable while a USB socket at the other end of the cable.

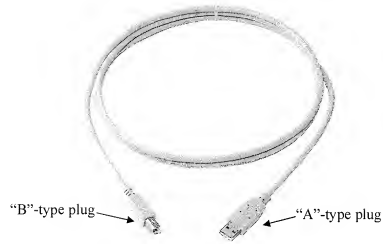

Figure 2. A USB Cable conforming to the USB Specification with USB plugs at both ends.

Therefore, as would be understood by a skilled artisan, the disclosure of Appellants' specification that the portable data storage device's USB plug is plugged into a USB socket on a computer has under the USB Specification inevitably led to the disclosed USB plug's capability of being **directly** plugged into a USB socket on a computer **without an intervening cable**. *See id.*

Regarding Appellants' characterization of the claimed device as functioning portably like a magnetic disk or CD, Appellants' specification, by first describing the shortcomings of magnetic disks or CDs and then introducing the advantage of the claimed invention over such magnetic disks or CDs, clearly intends for the claimed invention to serve as an alternative to such disks or CDs.[3] *See* pp. 1-2 of the specification. Because the specification clearly

[3] "[M]agnetic disks and CD ROMs . . . require a mechanical drive mechanism to be installed in or coupled to the computer to permit the data on the storage device to be read by the computer. . . . [T]he combination of the storage device and the drive mechanism for reading data from the storage device is generally bulky and/or delicate due to the moving parts that are required within the drive mechanism and/or storage device. . . . An advantage of the invention is . . . to provide a portable data storage device . . . which does not include moving parts or require a mechanical drive mechanism to read the data from the data storage device." *See* pp. 1-2 of the specification.

intends for the claimed invention to serve as an alternative to magnetic disks or CDs, a skilled artisan would understand that the inventors had possession of a portable memory device with a memory having sufficient capacity to enable the unitary portable data storage device to serve as an alternative to a magnetic disk or CD. The reason is that, if not providing at least the same level of ***storage capacity*** as that in a magnetic disk or CD, the claimed invention will not be a viable alternative to magnetic disks and CDs.[4] This will directly contradict the intention clearly disclosed in Appellants' specification as described above. Hence, by unambiguously disclosing the intention for the claimed invention to function like magnetic disks and CDs and hence to serve as an alternative to magnetic disks and CDs, Appellants' specification has expressly, implicitly or inherently supported the claimed invention's ***storage capacity*** to be at least comparable to that of a magnetic disk or CD.

(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

New Ground(s) of Rejection Based Upon Non-Statutory Double Patenting

Appellants hereby file the Terminal Disclaimer in Appendix D to overcome Examiner's new ground(s) of rejection based upon non-statutory, obviousness-type double patenting.

(7) CLAIMS APPENDIX

The rejected claims are reproduced in the attached Appendix A.

(8) EVIDENCE RELIED UPON

Appellants respond to the evidence replied upon by Examiner as follows.

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[4] This would put a ***lower limit*** of the storage capacity of the claimed invention of 1.44MB, the capacity of the floppy disk the claimed device was designed to replace.

(9) GROUNDS OF REJECTION

A. Written Description

Claims 22 – 29 stand rejected under 35 U.S.C. 112, ¶ 1 as failing to comply with the written description requirement. These rejections are respectfully traversed.

Proper Legal Standard

Again, as mentioned in Appellants' Appeal Brief filed on April 18, 2007, to comply with 35 U.S.C. § 112, ¶ 1, "the disclosure need only reasonably convey to persons skilled in the art that the inventor had possession of the subject matter in question." *Fujikawa v. Wattanasin*, 93 F.3d 1159, 1570 (Fed. Cir. 1996); *Fiers v. Revel*, 984 F.2d 1164, 1170 (Fed. Cir. 1993); *In re Kaslow*, 707 F.2d 1366, 1375 (Fed. Cir. 1983); *see also Vas-Cath v. Mahurkar*, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991). "The [Federal Circuit] and its predecessor have repeatedly held that claimed subject matter 'need not be described *in haec verba*' in the specification to satisfy the written description requirement." *Univ. of Rochester v. G.D. Searle & Co.*, 358 F.3d 916, 922-23 (Fed. Cir. 2004). Even when the express or inherent support in the specification is not present, ***implicit*** support in the disclosure will suffice. *See* MPEP 2163(I)(B) (8th ed., August 2005) ("While there is no *in haec verba* requirement, newly added claim limitations must be supported in the specification through express, ***implicit***, or inherent disclosure.") (emphasis added). Particularly, "the absence of definitions or details for well-established terms or procedures should not be the basis of a rejection under 35 U.S.C. 112, para. 1, for lack of adequate written description." MPEP 2163(II)(A)(1) (8th ed., August 2005).

Again, even though Appellants believe that the specification in the present application support all of the claims "specifically or inherently," Appellants respectfully submit that Examiner's demand of "specific or inherent support" in the earlier portion of the Office Action is a higher standard than that required by the law or advised by MPEP. In the later

portion of the 5-26-2005 Office Action, Examiner indicates that "new limitations must be supported explicitly, implicitly or inherently." (Emphasis added.) Appellants concur that this later formulation set forth by Examiner is closer to the proper standard laid out by the Federal Circuit in *Fujikawa et al.*

Claim Language at Issue

Based upon the legal standard discussed above, Appellants again respectfully submit that the specification reasonably conveys to persons skilled in the art that the inventors had possession of the claimed invention and that the specification expressly, implicitly or inherently supports all of the limitations in the claim language.

Claim 22 recites, again, in pertinent part:

> 22. A unitary portable data storage device which can be directly plugged into a universal serial bus (USB) socket of a computer and which is operative to function as an alternative to a magnetic disk or CD, and which is capable of storing software for installation to the computer or of receiving and storing user's data present in the computer, the unitary portable data storage device comprising:
>
> ***a USB plug integrated into the unitary portable data storage device without an intervening cable capable of coupling the unitary portable data storage device directly to a USB socket on a computer***;
>
> * * *
>
> a non-volatile solid-state memory, ***said memory being non-removable from the unitary portable data storage device and having sufficient capacity to enable the unitary portable data storage device to serve as an alternative to a magnetic disk or CD***; and
>
> a memory controller, ***the memory controller being coupled between the interface and the memory to control the flow of data between the memory and the USB plug in a manner to enable the unitary portable data storage device to serve as an alternative to a magnetic disk or CD.***
>
> (Emphasis added).

Particularly, Examiner objects to the phrases "without an intervening cable," "directly," "unitary," "integrated," "non-removable," and "having sufficient capacity . . . to serve as an alternative to a magnetic disk or CD." Appellants again address these objections in several segments as follows.

"USB plug . . . <u>without an intervening cable</u> capable of coupling . . . <u>directly</u> to a USB socket on a computer."

Examiner states that "the specification as originally filed does not support the limitation 'a USB plug integrated into the unitary portable data storage device without an intervening cable capable of coupling portable data storage device directly to a USB socket on a computer.'" Specifically, Examiner states that the specification, although "disclos[ing] a USB plug," "does not disclose that the USB plug 1 of the device is capable of coupling **directly** to a USB socket on a computer." Examiner further states that the specification does not "support the limitation '**without an intervening cable**.'"

As discussed above, "the disclosure need only reasonably convey to persons skilled in the art that the inventor had possession of the subject matter in question." *Fujikawa*, 93 F.3d at 1570; *Fiers*, 984 F.2d at 1170; *In re Kaslow*, 707 F.2d at 1375; *see also Vas-Cath*, 935 F.2d at 1563-64. In addition, the MPEP advises that implicit support in the specification suffice. *See* MPEP 2163(I)(B) (8th ed., August 2005).

As also discussed above, Examiner agrees that the specification discloses that a USB plug of the disclosed device [] is plugged into a USB socket on a computer. *See* p. 11 of the 5-26-2005 Office Action. By questioning whether the specification supports the disclosed USB plug's capability of being **directly** plugged into the USB socket on a computer **without an intervening cable**, however, Examiner appears to be concerned about the possibility of an intervening cable between the USB plug and the USB socket. Appellants again respectfully submit that, even if such possibility exists (which it actually does not as will be explained again below), the Appellants, by (i) disclosing a USB plug plugged into a USB socket on a computer and (ii) never disclosing, teaching, or suggesting the use of a connecting cable, have fully met their burden of "convey[ing] to persons skilled in the art that the inventor had possession of the subject matter in question[,]" *i.e.*, a portable storage device with a USB

plug capable of being plugged **directly** into the USB socket on a computer **without an intervening cable**. *Fujikawa*, 93 F.3d at 1570; *Fiers*, 984 F.2d at 1170; *In re Kaslow*, 707 F.2d at 1375; *see also Vas-Cath*, 935 F.2d at 1563-64. The reason is that, as a skilled artisan would understand, when the USB plug disclosed in the specification is plugged into a USB socket on a computer (as agreed by Examiner), such USB plug is plugged **directly** into the USB socket on the computer **without an intervening cable** under the USB Specification. *See* Figure 1 above on page 6 of this paper; *see also* para. 17 on pp. 8-9 of *Hyde Affidavit*; *see also* pp. 4-5 of *Kim Affidavit*. Consequently, Appellants believe that claims 22 – 29 are fully supported by the specification as required under 35 U.S.C. § 112, first paragraph in terms of "**directly**" and "**without an intervening cable**."

Furthermore, Appellants again respectfully submit that the possibility of an intervening cable does not exist here since such intervening cable is not permitted by the USB specification. The USB Specification defines the types of cables that are allowable under the Specification. At the time of the invention, the USB Specification did not allow an intervening cable between a USB plug and a USB socket because such a cable will necessarily and impermissibly have a plug at its one end while a socket at its other end. *See* para. 17 on pp. 8-9 of *Hyde Affidavit*; *see also* pp. 73-74 of the *USB Specification Revision 1.1* attached to *Kim Affidavit*. Therefore, as would be understood by a skilled artisan, the specification's disclosure that the USB plug is plugged into a USB socket on a computer has under the USB Specification inevitably led to the disclosed USB plug's capability of being **directly** plugged into the USB socket on a computer **without an intervening cable**. *See id.*

This further supports the Appellants' position that claims 22 – 29 are fully supported by the specification as required under 35 U.S.C. § 112, first paragraph in terms of "**directly**" and "**without an intervening cable**."

"USB plug integrated into the unitary portable data storage device without an intervening cable . . . ." and "Said memory being non-removable . . . ."

Examiner also states that "[t]he specification as originally filed does not support the limitation 'a USB plug integrated into the unitary portable data storage device.'" Examiner further states that there is "neither specific nor inherent support for this unitary construction of the claimed device with integrated plug in the specification." Again, as discussed above, "the disclosure need only reasonably convey to persons skilled in the art that the inventor had possession of the subject matter in question." *Fujikawa*, 93 F.3d at 1570; *Fiers*, 984 F.2d at 1170; *In re Kaslow*, 707 F.2d at 1375; *see also Vas-Cath*, 935 F.2d at 1563-64. In addition, according to the MPEP, implicit support in the specification suffices. *See* MPEP 2163(I)(B) (8th ed., August 2005).

As discussed earlier in this paper, throughout the entire specification, the disclosed device is shown as a single, whole, non-separable device 10 in Figure 1 and is always referred to as "a portable data storage device" or "the portable storage device" in the ***singular*** form. *See, e.g.,* p. 1, ll. 3 – 4, ll. 24 – 25; p. 2, ll. 8 – 9; p. 3, ll. 12, 15 – 20 and 22; and p. 4, l. 21.[5] One passage in the specification, "[i]f the installation of the software is complete, . . . *the device 10 may then be removed [] from the USB socket* on the computer" (italics supplied), describes the entire *device 10* as being removed from the socket in one single

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[5] The term "a" used throughout the entire specification in reference to the device 10 suggests that its elements are all part of the unitary and integrated device with no user-removable component. *See North Am. Vaccine, Inc. v. American Cyanamid Co.*, 7 F.3d 1571, 1575-76 (Fed. Cir. 1993) (where there is no indication in the patent specification that the inventors intended the term "a" to have other than its normal singular meaning it was proper to limit the claims to a singular device). *See also Abtox, Inc. v. Exitron Corp.*, 122 F.3d 1019, 1023-24 (Fed. Cir. 1997) (*opinion amended on other grounds*) (use of the article "a" in connection with the element "metallic gas-confining chamber" suggests a single chamber, and repeated references to "said chamber" in various portions of the device are described in the claim reinforces the singular nature of the chamber).

motion. *See* p. 7, ll. 19-22. A skilled artisan, reading these disclosures, alone or together, would clearly understand that the inventors had possession of a unitary and integrated device in which the USB plug is integrated into the unitary portable data storage device without an intervening cable or removable memory.

Examiner seems to be concerned with the possibility that a "single device" may have multiple non-integrated components removable by a user. Again, Appellants respectfully submit that, even if such possibility exists (which it actually does not as will be explained below), Appellants, by (i) disclosing the claimed device's ***singular*** nature and (ii) never mentioning any removable or non-integrated component, have fully met their burden of "convey[ing] to persons skilled in the art that the inventor had possession of the subject matter in question[,]" *i.e.*, a ***unitary*** portable storage device with all parts ***integrated*** and ***non-removable***. *Fujikawa*, 93 F.3d at 1570; *Fiers*, 984 F.2d at 1170; *In re Kaslow*, 707 F.2d at 1375; *see also Vas-Cath*, 935 F.2d at 1563-64. In addition, Appellants again respectfully submit that a device ***designed*** to include ***multiple*** non-integrated or user-removable ***components*** during the device's ***normal course of usage*** will not be understood by a skilled artisan as a **single** or **singular** device (as multiple components are by definition not single or singular). This further supports the Appellants' position that claims 22 – 29 are fully supported by the specification as required under 35 U.S.C. § 112, first paragraph in terms of "**unitary**," "**integrated**," and "**non-removable**."

In addition, a skilled artisan would understand that the employment of a Philips D12 component for device 10 in Figure 1 of Appellants' specification would result in the USB plug and the D12 component being integrated on the same PCB. *See* para. 22 on pp. 10-11 of *Hyde Affidavit*; *see also* para. 19 of *Kim Affidavit*. Also, a skilled artisan would understand that, unlike certain types of memory chips that are intended to be removable from the device in which the chips are installed, flash memory chips are fixedly installed within a device and

are "non-removable" under normal usage of the device. *See* para. 28 on p. 7 of *Kim Affidavit*. These further support Appellants' position that the specification teaches a unitary portable storage device with an integrated USB plug and a non-removable flash memory.

Again, as further evidence that the present invention discloses a unitary, integrated portable memory device with non-removable parts, the specification discloses a "portable data storage device . . . which does not include ***moving parts*** . . . ." in ll. 8-10 on p. 2 (emphasis added). That is, the specification supports a portable data storage device designed to contain no part that moves relatively to other part(s). If the USB plug is not "integrated" and is instead coupled to the rest of the device through an "intervening cable," then clearly the flexibility of the cable will allow the USB plug to move around and hence results in at least one part that moves relatively to other part(s). Likewise, if the memory is not "non-removable" and instead can be separated from the rest of the device by a user, then clearly the mobility of the memory during and after being separated by the user results in at least one part that moves relatively to other part(s). These situations will directly contradict the clear disclosure of a "portable data storage device . . . which does not include ***moving parts*** . . ." and hence will not be permissible.

As a result, for at least the forgoing reasons, the Appellants have clearly and reasonably conveyed to those skilled in the art that Appellants had possession of a ***unitary*** portable data storage device having a USB plug ***integrated*** into the unitary portable data storage device without an intervening cable that includes a ***non-removable*** memory. As such, claims 22 – 29 comply with the requirement under 35 U.S.C. § 112, first paragraph in terms of "**unitary**," "**integrated**," and "**non-removable**."

"Said memory . . . having sufficient capacity to enable the unitary portable data storage device to serve as an alternative to a magnetic disk or CD"

Examiner states that "[t]he specification as originally filed does not support the limitation [of] '. . . having sufficient capacity to enable the unitary portable data storage device to serve as an alternative to a magnetic disk of CD.'" Once again, as discussed above, "the disclosure need only reasonably convey to persons skilled in the art that the inventor had possession of the subject matter in question." *Fujikawa*, 93 F.3d at 1570; *Fiers*, 984 F.2d at 1170; *In re Kaslow*, 707 F.2d at 1375; *see also Vas-Cath*, 935 F.2d at 1563-64. Furthermore, according to the MPEP, implicit support in the specification suffices. *See* MPEP 2163(I)(B) (8th ed., August 2005).

Again as discussed above, Appellants' specification, by first describing the shortcomings of magnetic disks or CDs and then introducing the advantage of the claimed invention over such magnetic disks or CDs, clearly intends for the claimed invention to serve as an alternative to them. Because the specification clearly intends for the claimed invention to serve as an alternative to magnetic disks or CDs, a skilled artisan would understand that the inventors had possession of a portable memory device with a memory having sufficient capacity to enable the unitary portable data storage device to serve as an alternative to a magnetic disk or CD. The reason is that, if not providing at least the same level of ***storage capacity*** as that in a magnetic disk or CD, the claimed invention will not be a viable alternative to magnetic disks and CDs. This will directly contradict the intention clearly disclosed in the specification as described above. Hence, by unambiguously disclosing the intention for the claimed invention to serve as an alternative to magnetic disks and CDs, the specification has expressly, implicitly, or inherently supported the claimed invention's ***storage capacity*** to be at least comparable to that of a magnetic disk or CD.

As a result, the Appellants have clearly and reasonably conveyed to those skilled in the art that Appellants were in possession of a unitary portable data storage device having a memory with ***sufficient capacity*** to enable the unitary portable data storage device to serve as an alternative to a magnetic disk or CD. As such, claims 22 – 29 complies with the requirement under 35 U.S.C. § 112, first paragraph in terms of "**sufficient capacity**."

B. Prior Art – Anticipation

U.S. Patent No. 6,038,320 (Hereinafter "*Miller*")

Examiner rejected claims 22 – 24 and 26 – 28 under 35 U.S.C. § 102 as being anticipated by *Miller*. Appellants respectfully traverse. Appellants submit that *Miller* does not disclose each and every element of the claimed invention.

Again, *Miller* describes a security key that does not have the capability or capacity to serve as an alternative to a "*magnetic disk or CD*." The pending claims recite a unitary portable data storage device having, among other elements, "[a] *memory being non-removable from the unitary portable data storage device and having sufficient capacity to enable the unitary portable data storage device to serve as an alternative to a magnetic disk or CD*" as well as "[a] *memory controller being coupled between the interface and the memory to control the flow of data between the memory and the USB plug in a manner to enable the unitary portable data storage device to operate as an alternative to a magnetic disk or CD*." Here in the pending claims, the recited limitations: (1) the memory "*having sufficient capacity to enable the unitary portable data storage device to serve as an alternative to a magnetic disk or CD*" and (2) the memory controller "to *control the flow of data between the memory and the USB plug in a manner to enable the unitary portable data storage device to operate as an alternative to a magnetic disk or CD*" are structural limitations because they describe physical characteristics of the claimed device: the capability to manage the flow of large amounts of data and the sufficient memory capacity to serve as

an alternative to a magnetic disk or CD.[6] These structural limitations are not anticipated by *Miller*, which does not have the capability or capacity to serve as an alternative to a "*magnetic disk or CD*."

Furthermore, *Miller* cannot provide the ***"user's data"*** in its ***original*** condition when first stored into the device by a user like the present invention. To "*operate as an alternative to a magnetic disk or CD*," the device in the present invention must be capable of providing the ***"user's data"*** in its ***original*** condition when first stored into the device by a user, as such capability is fundamental to any "*magnetic disk or CD*," to which the disclosed unitary portable data storage device in the present invention "*operate[s] as an alternative*." A key difference of the present invention from *Miller* is, therefore, in the present invention's capability of providing the "user's data" in its ***original*** condition when first stored into the device by a user. The *Miller* device is capable of providing ***only*** the ***pre-assigned*** key code already ***pre-stored before shipping*** inside the *Miller* device, as opposed to the ***original*** user password later selected by a user (equivalent to the "user's data" in its ***original*** condition). Note that the ***original*** user-selected password (equivalent to the "user's data" in its ***original*** condition) can ***never*** be provided. The *Miller* device can provide ***only the encrypted password*** or ***the error message*** (depending on the password comparison results). In other words, nowhere in *Miller* is disclosed the capability of providing the ***original*** user-selected password, equivalent to the "user's data" in its ***original*** condition. As a result, the *Miller* device is clearly missing the present invention's element of "[a] *memory controller being coupled between the interface and the memory to control the flow of data between the*

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[6] Appellants respectfully note that functional terms serve as structural limitations when they are used as adjectives to define the physical characteristics of the device. *See United States Filter Corp. v. Glegg Water Conditioning, Inc.*, 2005 WL 80947, *1 (D. Mass); *In re Garnero*, 412 F.2d 276 (CCPA 1969). *See also Vanguard Products Corp. v. Parker Hannifan Corp.*, 234 F.3d 1370, 1372 (Fed. Cir. 2000); *Hazani v. U.S. Int'l Trade Comm'n*, 126 F.3d 1473, 1477 (Fed. Cir. 1997).

memory and the USB plug in a manner to enable the unitary portable data storage device to operate as an alternative to a magnetic disk or CD" that is capable of providing the "user's data" in its ***original*** condition when first stored into the unitary data storage device by a user.

For at least the foregoing reasons, *Miller* does not anticipate claims 22 – 24 and 26 – 28 of the present application. Thus, Appellants respectfully submit that claims 22 – 24 and 26 – 28 are patentable over *Miller* under 35 U.S.C. § 102.

U.S. Patent No. 6,457,099 (Hereinafter "*Gilbert*")

Examiner also rejected claims 22 – 24 and 26 – 28 under 35 U.S.C. § 102 as being anticipated by *Gilbert*. Appellants respectfully traverse. Appellants submit that *Gilbert* does not disclose each and every element of the claimed invention.

Again, unlike the Appellants' claimed invention, *Gilbert* never actually discloses a "USB plug" as part of the device throughout the *Gilbert* specification and/or claims. Without such specific disclosure of a USB plug as part of the USB device, a skilled artisan at the time of the invention would have no reason to assume that the *Gilbert* device included any USB plug conforming to the USB Specification because a conventional USB device would typically have a USB socket and could be plugged into a host computer system through a USB cable conforming to the USB Specification. *See* pp. 73-74 of the *USB Specification Revision 1.1* attached to *Kim Affidavit*. As a result, absent specific disclosure of a USB plug as part of the device, a skilled artisan would actually assume that a USB cable was needed for plugging a USB device into a host system at the time of Appellants' invention because plugging a USB device into a host system via a USB cable was the conventional way.

Again, what *Gilbert* describes is a Programmable Dedicated Application Card (PDAC) that requires the preferred embodiment described in col. 3, ll. 16-19 and in Figure 1, to realize all of the described capabilities. In this embodiment, the PDAC is connected to the computer's main internal bus and therefore has access to and intimate knowledge of the inner

workings of the computer. When using the alternative embodiment as described in col. 7, ll. 12-16, however, the PDAC is external to the computer and therefore does not have the ability to access the inner workings of the computer. This alternative embodiment describes a peripheral computer connected through standard serial or network methods and running independent software. *Gilbert* only casually mentions USB in this alternative embodiment, and there is nothing to imply the use of an integrated USB plug to allow direct connection to the host computer. As a result, Appellants respectfully submit that *Gilbert* does not teach or disclose a USB plug integrated into a unitary device or a storage device as claimed in the present application and that such argument is ***not*** an implicit or any other sort of admission that the specification fails to support the claimed invention.[7]

In addition, *Gilbert* does not teach a portable storage device capable of serving as an alternative to a magnetic disk or CD like the present invention. The reason is that, as opposed to a portable storage device such as a "*magnetic disk or CD*," what *Gilbert* really teaches is a PDAC that executes dedicated software application(s) ***pre-stored before shipping*** in the PDAC and provides only the ***results of running the software*** to a user via a host computer to which the PDAC is coupled. *See, e.g.*, ll. 45-62 in col. 1. *Gilbert* teaches that a dedicated RISC processor in the PDAC running software improves execution speed. *Gilbert* also teaches that, by running the software on the PDAC instead of on the host computer, resources of the host computer are freed up for other tasks, thereby improving the host's

[7] Examiner suggests that *Gilbert* (U.S. Patent No. 6,457,099), ll. 12-16 & 22-26 in col. 7, discloses as much information on the integrated USB plug in question as Appellants do. Appellants respectfully disagree because what *Gilbert* discloses there, *inter alia*, is merely an external device that may plug into a host computer via a USB. Unlike the Appellants, *Gilbert* never discloses a USB plug as part of the device or a Philips D12 component that a skilled artisan would expect to be integrated with the USB connector on the same PCB (Appellants' Figure 1) (*see* para. 22 on pp. 10-11 of *Hyde Affidavit*). These disclosures by the Appellants with the rest of Appellants' specification as a whole clearly and reasonably convey to a skilled artisan that Appellants at the time of the application had possession of a unitary storage device with an ***integrated USB plug***.

performance. *See, e.g.*, l. 63 in col. 1 to l. 7 in col. 2. *Gilbert* states that a PDAC is its own stand-alone computer system (as opposed to a storage device that is only ***part*** of a complete computer system), and the use of a PDAC functions as a hardware accelerator and enhances the capabilities of the host computer system. *See, e.g.,* ll. 33-36 in col. 2; ll. 21-26 in col. 3. As a result, by disclosing a PDAC as a hardware accelerator, *Gilbert* does not teach a portable storage device capable of serving as an alternative to a magnetic disk or CD as the present invention.

For at least the foregoing reasons, Appellants respectfully submit that the new claims 22 – 24 and 26 – 28 are patentable over *Gilbert* under 35 U.S.C. § 102(3).

C. Prior Art - Obviousness

For the reasons discussed above, neither *Miller* nor *Gilbert* anticipates the claimed invention. Also, Appellants respectfully submit that neither of them alone or in combination renders the claimed invention obvious. *Miller* is a security device that functions like an electronic key. To a skilled artisan, an electronic key is not similar to a magnetic disk or CD. A skilled artisan will have no reason to increase the *Miller* device's memory capacity to the level of a magnetic disk or CD because the size of the stored key code or encrypted password is so tiny (*e.g.*, *Miller* suggests that the password can be six bytes, *see* ll. 42-43 in col. 3).

In addition, *Miller* actually teaches away from having capacity at least comparable to that of a magnetic disk or CD due to efficiency commonly sought by any skilled artisan in designing any kind of device. Because of the tiny memory capacity needed, the kind of storage capacity at least comparable to that of a magnetic disk or CD is not only unnecessary but also extremely wasteful and inefficient. In other words, a skilled artisan would understand that the *Miller* device should never have capability or capacity to serve as an alternative to a magnetic disk or CD.

Furthermore, the secrecy of the stored data required by *Miller* also teaches away from functioning like a magnetic disk or CD. As discussed above, the fundamental functionality of a magnetic disk or CD is to provide the "user's data" in its ***original*** condition when first stored by a user. The *Miller* device can never provide to the host computer the original user-selected password (*i.e.*, the "user's data" in its original condition). Only the encrypted password can be provided. In fact, because of its secrecy, the original user-selected password (*i.e.*, the "user's data" in its original condition) should never be provided to the host computer. In other words, *Miller* actually teaches away from providing the "user's data" in its original condition, the functionality fundamental to a magnetic disk or CD. That is, to a skilled artisan, the *Miller* device should never function like a magnetic disk or CD that provides the "user's data" in its original condition when first stored by the user. As a result, because of all the reasons stated above, the *Miller* device does ***not*** render the present invention obvious to a skilled artisan.

Gilbert, on the other hand, is a PDAC that functions like a programmable hardware accelerator. To a skilled artisan, a PDAC or a programmable hardware accelerator is not similar to a magnetic disk or CD. A skilled artisan will have no reason to use a PDAC or a hardware accelerator as an alternative to a magnetic disk or CD because the functionality of a PDAC or a hardware accelerator is very different from that of a magnetic disk or CD.

In addition, *Gilbert* actually teaches away from functioning like a magnetic disk or CD. As discussed earlier in this paper, the fundamental functionality of a magnetic disk or CD is to provide the "user's data" in its original condition when first stored by a user. The *Gilbert* device neither stores the "user's data" into its non-volatile memory nor provides to the host computer the "user's data" at all. Only the results of running the software stored on the *Gilbert* device are provided. In other words, *Gilbert* actually teaches away from providing the "user's data," the functionality fundamental to a magnetic disk or CD. As a

result, because of all the reasons stated above, the *Gilbert* device does ***not*** render the present invention obvious to a skilled artisan.

Claims 25 stands rejected under 35 U.S.C. § 103 as being unpatentable for obviousness. Claims 25 depends from claim 22 and is patentable for at least the same rationale discussed in detail above.

Claim 29 stands rejected under 35 U.S.C. 103(a) as being unpatentable over *Margalit et al.* (U.S. Patent No. 6,748,451, hereinafter "*Margalit*") in view of *Jha et al.* (U.S. Patent No. 6,407,949, hereinafter "*Jha*"). Claim 29 is dependent on claim 22 and is therefore allowable for all reasons set forth above.

First of all, Figures 3 and 4 of *Margalit* seem to have defined its own plug that does not appear to conform to the integrated "A"-type USB plug under the USB Specification as disclosed in Appellants' specification. Hence, *Margalit* does not appear to have disclosed the limitation of an integrated "A"-type USB plug confirming to the USB Specification as in Appellants' claim 22.

Furthermore, *Margalit* discloses a security device that does not have the capability of serving as an alternative to a magnetic disk or CD.[8] *Margalit* clearly states that the device is "analogous to a memory smart card." *See* col. 4, ll. 21-22 of *Margalit*. The amount of the information on a memory smart card is very small (up to only 1 KiloByte) because of such memory smart card's very limited storage capacity at the time of the claimed invention. *See* para. 21 on p. 10 of *Hyde Affidavit*. This is entirely consistent with *Margalit*'s disclosure that its design can only hold a small amount of information, *i.e.*, "information characterizing a mobile user . . . ." *See* ll. 27-32 in col. 6 of *Margalit*. "Such information may comprise user

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[8] *Margalit* describes that the PC treats the device as a specialist device and does ***not*** recognize it, or treat it, as a storage device like a magnetic disk or CD, as claimed in the Appellants' application. *See, e.g.*, l. 5, col. 7 to l. 61, col. 9 in *Margalit*.

identify authentication information, banking information, access rights information, etc." *See id.* Hence, "analogous to a memory smart card," the *Margalit* device disclosed in its Figure 1 is designed to handle data of such very small amount. *See* ll. 20-23 in col. 4 of *Margalit*. Since the amount of data stored is so small, there is no requirement to move this data into and out of the device at high performance. *See* para. 21 on p. 10 of *Hyde Affidavit*. In fact, *Margalit* teaches a CY7C63001A component, a low-speed (1.5 Megabits per second) USB interface component, to be used in its "key" device, clearly indicating such slow data rate. *See* para. 22 on pp. 10-11 of *Hyde Affidavit*; *see also* Figures 3 and 4 of *Margalit*. As a result, a skilled artisan would understand that the CY7C63001A component taught in *Margalit* to handle only a small amount of slow data was not designed to operate with the storage capacity at least comparable to that of a magnetic disk or CD, as claimed in Appellants' application. *See* paras. 20-21 on p. 10 of *Hyde Affidavit*. Likewise, a skilled artisan would understand that the memory capacity employed to store such small amount of data in *Margalit* does not anticipate or render obvious claims directed to a memory having sufficient capacity to serve as an alternative to a magnetic disk or CD. *See id.* Hence, the *Margalit* "key" device contains neither a USB component having the capability nor a memory having the capacity to enable its device to operate as an alternative to a magnetic disk or CD, as claimed in the Appellants' application. In addition, *Margalit*'s small memory would be wholly inconsistent with the division of such already very small memory into a plurality of zones. Hence, there would be no motivation for a skilled artisan to combine *Margalit* and *Jha* to create multiple zones in the memory.

D. Firsthand Practical Knowledge of Unsolved Needs and Commercial Success Combined with Copying by Others Show Non-Obviousness.

Appellants again submit that they have clearly demonstrated that the claimed invention is not anticipated by any prior art. It is therefore appropriate to submit evidence of

secondary considerations of non-obviousness to further support the patentability of the claimed invention. The Appellants hereby respectfully attach the Affidavit of John Hyde, an expert in the field of Universal Serial Bus (USB) and USB based devices. This Affidavit presents the evidence of ***secondary considerations*** and must be considered in its entirety.

The Federal Circuit held that "[f]irsthand practical knowledge of unsolved needs in the art, by an expert, is evidence of the state of the art." *See In re Piasecki*, 745 F.2d 1468, 789 (Fed. Cir. 1984) (citing *In re McKenna*, 203 F.2d 717 (C.C.P.A. 1953)). At the time of the present invention, "[t]he long-felt needs for greater capacity storage devices (especially for music and graphic files), however, led to the development and introduction of alternative storage devices." *See* para. 13 on pp. 5-6 of *Hyde Affidavit*. "Many touted alternatives, such as IBM's 2.88MB floppy disk, Iomega's ZIP and Jaz Drives, Imation's SuperDisk, Sony's HiFD Drive, and Rewritable Compact Discs, comprise a two-part system, namely a drive (*i.e.*, the mechanism for reading and writing data from and to the storage media) and the storage media itself (usually a magnetic disk or CD). This was the approach utilized by the incumbent 'drive and media' systems." *See id.* "For various reasons, none of these touted replacements truly lived up to expectations or replaced the floppy disk as the universal medium for storage." *See* para. 15 on p. 7 of *Hyde Affidavit*. Clearly, the expert Hyde's firsthand knowledge of unsolved needs in the art at the time of the present invention is evidence of the state of the art back then. In other words, the long-felt needs and failure by others at the time of the invention combined with the fact that the claimed invention fulfilled such long-felt needs strongly indicate the non-obviousness of Applications' present invention. *See* pp. 5-7 and para. 24 on p. 11 of *Hyde Affidavit*.

The Federal Circuit Court has also held that a combination of commercial success and copying by the infringer may provide strong evidence of non-obviousness. *See Heidelberg Harris, Inc. v. Mitsubishi Heavy Industries, Ltd.*, Civ. App. No. 99-1100 (Fed. Cir. Sept. 18,

2000) (unpublished). The Appellants' company, Trek, manufactures and sells the present invention under the trademark "ThumbDrive." The "ThumbDrive" product includes all features of the portable USB storage device claimed in the present invention, including an integrated USB plug capable of coupling the device directly to a USB socket on a computer without an intervening cable; an interface coupled to the integrated USB plug allowing communication via the USB protocol; a non-removable non-volatile solid-state memory having sufficient capacity to enable the device to serve as an alternative to a magnetic disk or CD; and a memory controller coupled between the interface and the memory to control the flow of data between the memory and the USB plug in a manner to enable the device to serve as an alternative to a magnetic disk or CD. These features are key to fulfilling the long-felt needs as explained below.

As mentioned before, ever since the launch of the claimed invention (ThumbDrive) in March 2000, the never-before-seen products have enjoyed numerous praises from industrial commentators and tremendous commercial success because of the claimed invention's features. *See Hyde Affidavit* pp. 5 and 11-15; *see also Hyde Affidavit* pp. 11-15 for examples of the praises from industrial commentators.

"Because of all of its features, the claimed invention has been a commercial success ever since it was launched in February 2000, at CeBit 2000, which is the foremost computer and IT fair in the world. . . . [S]ince the launch, over 450,000 units of the claimed invention's various versions, *e.g.*, 'ThumbDrive Smart,' 'ThumbDrive Secure,' and the latest, the 'ThumbDrive Touch,' were sold around the world, with sales averaging 12 million Singapore dollars from 2000 to 2003 (approximately 6.8 million U.S. dollars based upon the average exchange rate from 2000 to 2003)." *Hyde Affidavit* p 5. "Apart from the CeBit and COMDEX shows in 2000, [Appellants' company] Trek also exhibited the claimed invention at the Computex show in Taiwan." *Hyde Affidavit* p. 14. In October 2001, Appellants'

company Trek was selected by IBM to manufacture essentially the "ThumbDrive" products for IBM, which were to be sold as "IBM Memory Key." *See id.* A similar deal was entered into with Sonnet Technologies in December 2001. *See id.*

"Since the launch, the claimed invention ([sold under the trademark 'ThumbDrive['])] has become close to being regarded by the industry as the true replacement for the floppy drive. This is not surprising as the claimed invention offered all of the advantages of the floppy disk (universality, compactness, affordable storage capacity, *etc.*) but with the advantage of having significantly larger storage capacities than the floppy disk, promise of even greater storage capacities in the future, but at a miniscule fraction of the size. For example, a single 128MB version has the equivalent capacity of about 88 pieces of 3.5-inch floppy disks." *Id*; *see also Hyde Affidavit* pp. 14-15 for some other examples of praises from industrial commentators after the launch of the claimed invention.

After the Appellants' company Trek introduced the claimed invention into the market, other companies have copied the claimed invention. *See Hyde Affidavit* pp. 16-17 for a non-exhaustive list of such companies and their copying products (which are ever increasing). As held by the Federal Circuit, a combination of commercial success and copying by the infringer may provide strong evidence of non-obviousness. The praises by industrial commentators clearly show the commercial success enjoyed by the claimed invention (ThumbDrive) resulted from its features claimed in the present application. This commercial success combined with copying by others clearly shows that the present invention is not obvious to a skilled artisan. *See Heidelberg*, Civ. App. No. 99-1100 (Fed. Cir. Sept. 18, 2000) (unpublished).

E. New Ground(s) of Rejection Based Upon Non-Statutory Double Patenting

As mentioned above, Appellants file the Terminal Disclaimer in Appendix D to overcome Examiner's new ground(s) of rejection based upon non-statutory, obviousness-type double patenting.

(10) EXAMINER'S RESPONSE TO APPELLANTS' ARGUMENTS

A. Witten Description

Examiner states that Appellants' specification does not mention the USB Specification (or its version) and hence does not disclose the claimed device's conformity to the USB Specification (or its version). By arguing so, Examiner seems to believe that at the time of Appellants' invention, there existed either other devices called "USB" or multiple versions of the "USB Specification" or both. As would be understood by a skilled artisan, "USB" (or "Universal Serial Bus") is a term of art that points to a device conforming to the USB Specification, which is an industry standard and has only one latest version in effect at any given time. Hence, Appellants' specification by mentioning "USB" has unambiguously indicated to any skilled artisan that the disclosed device conforms to the latest USB Specification version in effect at the time of the claimed invention.

Examiner states that, because the USB Specification specifies more than one type of plug and socket, Appellants' specification does not comply with the written description requirement by failing to identify which type of the plug is being employed by the disclosed device. Appellants respectfully disagree. Appellants' specification explicitly and unambiguously specifies that USB plug 1 of device 10 is to be plugged into the USB socket on a computer. *See* p. 5, ll. 18-21 and Figure 1 of Appellants' specification. A USB socket on a computer, which as a skilled artisan would understand is a "host system," under the USB Specification at the time of the claimed invention is an "A"-type socket. *See Kim Affidavit* at ¶ 16. Only an "A"-type plug would be able to plug into an "A"-type socket. As a result, by

specifying that USB plug 1 of device 10 is to be plugged into the USB socket on a computer, Appellants' specification has explicitly and unambiguously disclosed to a skilled artisan at the time of the claimed invention that the disclosed USB plug is an "A"-type plug.

Examiner also uses Appellants' description of the "direct" connection between socket 8 and plug 1 as evidence that the plugging action between plug 1 and the socket on a computer is not necessarily "direct" because Appellants does not explicitly indicates that such plugging is "direct" herein. Appellants respectfully disagree. First of all, a skilled artisan by looking at Figure 1 and by reading the description that plug 1 and socket 8 are directly coupled would understand that plug 1 and socket 8 are physically and electronically "coupled" inside an integrated and unitary device 10. That is why the connection between plug 1 and socket 8 is "direct" as all components 1-8 are integrated into one unitary device 10. When describing the plugging action between the "A"-type socket on a computer and the "A"-type USB plug 1, however, the word "direct" is not necessary because there is simply no "indirect" plugging between an "A"-type socket and an "A" type plug possible under the USB Specification at the time of the invention.

Examiner challenges Mr. Hyde's statement that "an intervening cable between a USB plug and a USB socket (as an extension cable) was not permitted under the USB Specification at the time of the claimed invention" by citing to section 6.4.1 Detachable Cable Assembly of the USB Specification Revision 1.1. Appellants respectfully disagree. A skilled artisan would understand that, under the USB Specification, the "Detachable Cable Assembly" describes a cable with plugs at <u>both</u> ends (as shown in section 6.2 on p. 73 of the USB Specification Rev. 1.1. attached to the *Kim Affidavit* and as shown in Figure 2 on p. 7 of this paper), typically with an "A"-type plug at one end and a "B"-type plug at the other. Such a cable, as would be understood by a skilled artisan, connects two receptacles (i.e., two sockets). Mr. Hyde's statement is accurate because an intervening cable between a USB plug

a USB socket would necessarily require a cable with a plug at one end (to plug into the USB socket) but a ***socket*** (i.e., a ***receptacle***) at the other (to be plugged into by the plug), which is not an allowed cable under section 6.2 of the USB Specification. *See id.*

Examiner contends that Appellants' specification fails to disclose a computer with an "A"-type socket. Appellants respectfully disagree. As mentioned above, a skilled artisan would understand that a computer is a "host system," which must have an "A"-type receptacle (i.e., socket) under section 6.2 of the USB Specification. *See id.*

Examiner also contends that the Appellants' specification does not specifically disclose the claimed innovative feature of eliminating the "B"-type socket used with the D-12 part and suggests that the conventional use of a D-12 part in close proximity of a "B"-type socket would lead a skilled artisan to believe plug 1 to be of the "B"-type. Appellants respectfully disagree. Quite contrary to Examiner's contention, Appellants' specification discloses explicitly and unambiguously the claimed innovation of (1) eliminating the "B"-type socket conventionally used with the D-12 part and (2) replacing such "B"-type socket with an "A"-type plug. As mentioned above, by disclosing that plug 1 of device 10 plugs into a USB socket on a computer, a host system that must have an "A"-type socket (i.e., receptacle) under the USB Specification, Appellants' specification has explicitly and unambiguously disclosed that plug 1 of device 10 must be an "A"-type plug. There is no way that a skilled artisan would understand plug 1 to possibly be of the "B"-type as it is contrary to the USB Specification at the time of the claimed invention. Figure 1 then shows explicitly and unambiguously that USB plug 1 is coupled to a D-12 part, which as a skilled artisan would understand has no reason not to work with an "A"-type plug. Granted, as indicated in the *Kim Affidavit*, conventionally such D-12 part is integrated on the same PCB with a "B"-type USB socket. However, since a "B"-type socket would never be able to plug into any socket on a computer as explicitly and unambiguously disclosed by Appellants' specification,

a skilled artisan would never conclude that the USB connector 1 shown in Figure 1 is a "B"-type socket when reading Appellants' specification as a whole. On the other hand, because there is no reason why an "A"-type plug would not work with a D-12 part, Figure 1 has explicitly and unambiguously disclosed to a skilled artisan that innovatively an "A"-type plug 1, as opposed to a "B"-type socket, is integrated on the same PCB with the D-12 part in the claimed invention. In other words, a skilled artisan would have to understand that such D-12 part is integrated with the "A"-type plug 1 on the same PCB, which eliminates the need of a "B"-type socket, because this is the one and only coherent and consistent understanding of Appellants' specification as a whole.

As a result, a skilled artisan would necessarily read the disclosure "the plug 1 of the device 10 is plugged into . . . a USB socket on a computer" to mean "the 'A'-type plug 1 of the device 10 is directly plugged into . . . a 'A'-type socket on a computer without an intervening cable" for the following reasons: (1) under the USB Specification, a computer is a host system that must have an "A"-type USB socket (i.e., receptacle) that can be plugged into by only an "A"-type USB plug, (2) an extension cable between an "A"-type USB plug and an "A"-type USB socket (i.e., receptacle), necessarily having an "A"-type plug at one end and an "A"-type receptacle (i.e., a socket) at the other, is not possible because the USB Specification allows only plugs at both ends of a cable, and (3) USB connector 1 shown in Figure 1 must be an "A"-type plug that is integrated with the D-12 part on the same PCB because a conventional "B"-type socket would not plug into any socket on a computer. In other words, a skilled artisan would have to understand the claimed device to have an integrated USB plug capable of directly plugging onto the USB socket on a computer without an intervening cable.

Examiner states that Appellants' reference to the device in a singular form does not disclose the integrated and unitary nature of the device with the non-removable memory.

Appellants respectfully disagree. Appellants' specification does not just employ a singular form for the claimed device in a vacuum. In addition to the singular form of device 10 repeatedly used throughout Appellants' specification, Figure 1 of Appellants' specification also demonstrates that all of the components 1-8 are integrated into a single device 10. Appellants' specification also implies that all of the components 1-8 are "directly" coupled, just like plug 1 and socket 8 (note that there is no reason for a skilled artisan to believe that the connections among the components 1-8 are any different from the particular connection between plug 1 and socket 8, which a skilled artisan would understand to be "direct" in an integrated and unitary fashion when viewed in conjunction of the whole device 10 shown in Figure 1). In addition, as mentioned above, the fact that a D-12 part at the time of the invention is typically integrated with a USB connector on the same PCB also supports Appellants' assertion that a skilled artisan would understand all of the components 1-8 of device 10 are integrated and non-removable in a whole, unitary device 10. A skilled artisan, in reading Appellants' specification as a whole, would have no reason to believe that any of the components 1-8 is not integrated or non-removable or to believe that, as Examiner contends, the memory chips are installed on sockets. As a result, Appellants' specification has supported the integrated and non-removable features of the claimed invention.

Examiner also states that Appellants' specification fails to convey that Appellants were in possession of the claimed invention that has the level of capacity sufficient to enable the device to serve as an alternative to a magnetic disk or CD. Appellants respectfully disagree. Again, Appellants' specification, by first describing the shortcomings of magnetic disks or CDs and then introducing the advantage of the claimed invention in overcoming the shortcomings of such magnetic disks or CDs, clearly intends for the claimed invention to serve as an alternative to them. Because the specification clearly intends for the claimed invention to serve as an alternative to magnetic disks or CDs, a skilled artisan would

understand that the inventors had possession of a portable memory device with a memory having sufficient capacity to enable the unitary portable data storage device to serve as an alternative to a magnetic disk or CD. The reason is that, if not providing at least the same level of ***storage capacity*** as that in a magnetic disk or CD, the claimed invention will not be a viable alternative to magnetic disks and CDs. This will directly contradict the intention clearly disclosed in the specification as described above. Hence, by unambiguously disclosing the intention for the claimed invention to serve as an alternative to magnetic disks and CDs, the specification has expressly, implicitly and/or inherently supported the claimed invention's ***storage capacity*** to be at least comparable to that of a magnetic disk or CD.

As a result, the Appellants have clearly and reasonably conveyed to those skilled in the art that Appellants were in possession of a unitary portable data storage device having a memory with ***sufficient capacity*** to enable the unitary portable data storage device to serve as an alternative to a magnetic disk or CD.

B. Prior Art – Anticipation

U.S. Patent No. 6,038,320 (Hereinafter "*Miller*")

Examiner states that the *Miller* device has enough capacity to enable it to serve as an alternative to a magnetic disk or CD for storing an encrypted. Appellants respectfully disagree. *Miller* describes a security key that does not have the capability or capacity to serve as an alternative to a "*magnetic disk or CD.*" A magnetic disk or CD typically has at least 1.44 Megabytes of storage capacity. An encrypted password, which the *Miller* device stores, typically requires much less storage capacity. *Miller* has even explicitly suggested that an encrypted password in its device would require only 6 bytes. *See* col. 3, ll. 42-43 of *Miller*. A capacity of at least 1.44 Megabytes represents at least 240,000 times of the capacity of 6 bytes suggested by *Miller*. As a result, a skilled artisan would understand that it is extremely inefficient and unnecessary to have a storage capacity that can serve as an alternative to a

magnetic disk or CD for storing an encrypted password in *Miller*. Hence, a skilled artisan would understand that *Miller* does not disclose such storage capacity and actually teaches away from such capacity for efficiency reasons.

In Appellants' pending claims, the recited limitations: (1) the memory "*having sufficient capacity to enable the unitary portable data storage device to serve as an alternative to a magnetic disk or CD*" and (2) the memory controller "to *control the flow of data between the memory and the USB plug in a manner to enable the unitary portable data storage device to operate as an alternative to a magnetic disk or CD*" are structural limitations because they describe physical characteristics of the claimed device: the capability to manage the flow of large amounts of data and the sufficient memory capacity to serve as an alternative to a magnetic disk or CD.[9] These structural limitations are not anticipated by *Miller*, which does not have the capability or capacity to serve as an alternative to a magnetic disk or CD.

Furthermore, as mentioned before, *Miller* cannot provide the ***"user's data"*** in its ***original*** condition when first stored into the device by a user like the present invention. To "*operate as an alternative to a magnetic disk or CD*," the device in the present invention must be capable of providing the "user's data" in its original condition when first stored into the device by a user, as such capability is fundamental to any "*magnetic disk or CD*," to which the unitary portable data storage device in the present invention "*operate[s] as an alternative*." A key difference of the present invention from *Miller* is, therefore, in the present invention's capability of providing the "user's data" in its ***original*** condition when

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[9] Appellants respectfully note that functional terms serve as structural limitations when they are used as adjectives to define the physical characteristics of the device. *See United States Filter Corp. v. Glegg Water Conditioning, Inc.*, 2005 WL 80947, *1 (D. Mass); *In re Garnero*, 412 F.2d 276 (CCPA 1969). *See also Vanguard Products Corp. v. Parker Hannifan Corp.*, 234 F.3d 1370, 1372 (Fed. Cir. 2000); *Hazani v. U.S. Int'l Trade Comm'n*, 126 F.3d 1473, 1477 (Fed. Cir. 1997).

first stored into the device by a user. The *Miller* device is capable of providing ***only*** the ***pre-assigned*** key code already ***pre-stored before shipping*** inside the *Miller* device, as opposed to the ***original*** user password later selected by a user (*i.e.*, the "user's data" in its ***original*** condition). Note that the ***original*** user-selected password (*i.e.*, the "user's data" in its ***original*** condition) can ***never*** be provided. The *Miller* device can provide ***only the encrypted password*** or ***the error message*** (depending on the password comparison results). In other words, nowhere in *Miller* is disclosed the capability of providing the "user's data" in its ***original*** condition (*i.e.*, the ***original*** user-selected password). As a result, the *Miller* device cannot serve as an alternative to a magnetic disk or CD and is thus clearly missing the present invention's element of "[a] *memory controller being coupled between the interface and the memory to control the flow of data between the memory and the USB plug in a manner to enable the unitary portable data storage device to operate as an alternative to a magnetic disk or CD*" that is capable of providing the "user's data" in its original condition when first stored into the unitary data storage device by the user.

For at least the foregoing reasons, *Miller* does not anticipate claims 22 – 24 and 26 – 28 of the present application. Thus, Appellants respectfully submit that claims 22 – 24 and 26 – 28 are patentable over *Miller* under 35 U.S.C. § 102.

U.S. Patent No. 6,457,099 (Hereinafter "*Gilbert*")

Examiner states that *Gilbert* discloses as much as Appellants do in terms of direct plugging of a USB plug into a USB socket on a computer without an intervening cable. Appellants respectfully traverse. First of all, unlike the Appellants' claimed invention, *Gilbert* never actually discloses a "USB plug" as an integral part of the device throughout the *Gilbert* specification and/or claims. *Gilbert* only casually mentions USB in its description of an alternative embodiment, and there is nothing to imply the use of an integrated USB plug to allow direct connection to the host computer without a USB cable. Examiner's assertion that

a casual reference to USB discloses as much as Appellants do in their specification, which describes a novel USB device that has an integrated USB plug, amounts to impermissible hindsight because *Gilbert* never discloses a USB plug, period.

Unless a USB device has an integrated USB plug as claimed in Appellants' invention, a skilled artisan would understand that a conventional external device communicating through the USB, such as the one disclosed in *Gilbert*, would connect to a host computer through a USB cable with USB plugs at its both ends under the USB Specification. *See* section 6.2 on p. 73 of the USB Specification attached to the *Kim Affidavit*; *see also* Figure 2 on p. 7 of this paper. In other words, the external USB device must have a "B"-type socket. *See id.* Because *Gilbert* never discloses a USB plug as part of its device, a skilled artisan could only understand the *Gilbert* device to be a conventional USB device that connects to a host computer via a USB cable. Hence, it must have a "B"-type socket. As a result, Appellants respectfully submit that *Gilbert* does not teach or disclose a USB plug integrated into a unitary device or a storage device as claimed in the present application and that such argument is ***not*** an implicit or any other sort of admission that the specification fails to support the claimed invention.[10]

Examiner states that *Gilbert* has sufficient capacity to enable its device to serve as an alternative to a magnetic disk or CD. Appellants respectfully disagree. First of all, *Gilbert* does not teach a portable storage device capable of serving as an alternative to a magnetic

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[10] Examiner suggests that *Gilbert* (U.S. Patent No. 6,457,099), ll. 12-16 & 22-26 in col. 7, discloses as much information on the integrated USB plug in question as Appellants do. Appellants respectfully disagree because what *Gilbert* discloses there, *inter alia*, is merely an external device that may plug into a host computer via a USB. Unlike the Appellants, *Gilbert* never discloses a USB plug as part of the device or a Philips D12 component that a skilled artisan would expect to be integrated with the USB plug on the same PCB (Appellants' Figure 1) (*see* para. 22 on pp. 10-11 of *Hyde Affidavit*). These disclosures by the Appellants with the rest of Appellants' specification as a whole clearly and reasonably convey to a skilled artisan that Appellants at the time of the application had possession of a unitary storage device with an ***integrated USB plug***.

disk or CD like the present invention. The reason is that, as mentioned before, what *Gilbert* really teaches is a PDAC that executes dedicated software application(s) ***pre-stored before shipping*** in the PDAC and provides only the ***results of running the software*** to a user via a host computer to which the PDAC is coupled. *See, e.g.*, ll. 45-62 in col. 1. *Gilbert* teaches that a dedicated RISC processor in the PDAC running software improves execution speed. *Gilbert* also teaches that, by running the software on the PDAC instead of on the host computer, resources of the host computer are freed up for other tasks, thereby improving the host's performance. *See, e.g.*, l. 63 in col. 1 to l. 7 in col. 2. *Gilbert* states that a PDAC is its own stand-alone computer system (as opposed to a storage device that is only ***part*** of a complete computer system), and the use of a PDAC functions as a hardware accelerator and enhances the capabilities of the host computer system. *See, e.g.,* ll. 33-36 in col. 2; ll. 21-26 in col. 3. As a result, because *Gilbert* is simply not capable of serving as an alternative to a magnetic disk or CD regardless of its capacity, *Gilbert* does not teach a portable storage device capable of serving as an alternative to a magnetic disk or CD as the present invention.

For at least the foregoing reasons, Appellants respectfully submit that the new claims 22 – 24 and 26 – 28 are patentable over *Gilbert* under 35 U.S.C. § 102(3).

C. Prior Art - Obviousness

Examiner argues that *Miller* has sufficient capacity to enable it to serve as an alternative to a magnetic disk or CD. Applicants respectfully disagree. As mentioned above, to a skilled artisan, the type of security devices in *Miller* will never be capable of serving as an alternative to a magnetic disk or CD, and a skilled artisan would have no reason to increase the capacity of a device like those disclosed in *Miller* for efficiency reasons. Similarly, because to a skilled artisan the type of acceleration devices disclosed in *Gilbert* will never be capable of serving as an alternative to a magnetic disk or CD, *Gilbert* does not anticipate the claimed invention that is capable of serving as an alternative to a magnetic disk

or CD. For the reasons discussed above, neither *Miller* nor *Gilbert* anticipates the claimed invention. Also, Appellants respectfully submit that neither of them alone or in combination renders the claimed invention obvious. *Miller* is a security device that functions like an electronic key. To a skilled artisan, an electronic key is not similar to a magnetic disk or CD. A skilled artisan will have no reason to increase the capacity of a security device as disclosed in *Miller* to serve as an alternative to a magnetic disk or CD because the size of the stored key code or encrypted password in *Miller* is simply too tiny (*e.g.*, *Miller* suggests that the password can be six bytes, *see* ll. 42-43 in col. 3).

In addition, *Miller* actually teaches away from functioning like a magnetic disk or CD due to efficiency commonly sought by any skilled artisan in designing any kind of device. Because of the tiny memory capacity needed, a capacity capable of serving as an alternative to a magnetic disk or CD is not only unnecessary but also extremely wasteful and inefficient. In other words, to a skilled artisan, the *Miller* device should never have the capability or capacity to serve as a magnetic disk or CD.

Furthermore, the secrecy of the stored data required by *Miller* also teaches away from functioning like a magnetic disk or CD. As discussed above, a fundamental functionality of a magnetic disk or CD is to provide the "user's data" stored by a user in its original condition. The *Miller* device can never provide to the host computer the original user-selected password (*i.e.*, the "user's data" in its original condition). Only the encrypted password can be provided. In fact, because of its secrecy, the original user-selected password (*i.e.*, the "user's data" in its original condition) should never be provided to the host computer. In other words, *Miller* actually teaches away from providing the "user's data" in its original condition when first stored into the device by a user, the functionality fundamental to a magnetic disk or CD. That is, to a skilled artisan, the *Miller* device should never function like a magnetic disk or CD that provides the stored "user's data" in its original condition. As a result,

because of all the reasons stated above, the *Miller* device does ***not*** render the present invention obvious to a skilled artisan.

Gilbert, on the other hand, is a PDAC that functions like a programmable hardware accelerator. To a skilled artisan, a PDAC or a programmable hardware accelerator is not similar to a magnetic disk or CD. A skilled artisan will have no reason to use a PDAC or a hardware accelerator as an alternative to a magnetic disk or CD because the functionality of a PDAC or a hardware accelerator is very different from that of a magnetic disk or CD.

In addition, *Gilbert* actually teaches away from functioning like a magnetic disk or CD. The fundamental functionality of a magnetic disk or CD is to provide the "user's data" stored by a user in its original condition. The *Gilbert* device neither stores the "user's data" into its non-volatile memory nor provides the host computer with the "user's data" in its original condition. Only the results of running the software stored on the *Gilbert* device are provided. In other words, *Gilbert* actually teaches away from providing the "user's data" in its original condition, a functionality fundamental to a magnetic disk or CD. As a result, because of all the reasons stated above, the *Gilbert* device does ***not*** render the present invention obvious to a skilled artisan.

Examiner rejects claim 29 as being obvious over *Margalit et al.* (U.S. Patent No. 6,748,451, hereinafter "*Margalit*") in view of *Jha et al.* (U.S. Patent No. 6,407,949, hereinafter "*Jha*") and also states that claim 22 is anticipated by *Margalit*. Appellants respectfully disagree. As mentioned earlier in this paper, Figures 3 and 4 of *Margalit* seem to have defined its own plug that does not appear to conform to the integrated "A"-type USB plug under the USB Specification as disclosed in Appellants' specification. Hence, *Margalit* does not appear to have disclosed the limitation of an integrated "A"-type USB plug confirming to the USB Specification as in Appellants' claim 22.

Furthermore, similar to *Miller*, *Margalit* discloses a security device that cannot serve as an alternative to a magnetic disk or CD, which typically would offer 1.44 Megabytes of storage capacity, as a skilled artisan would understand at the time of Appellants' invention. As discussed before, *Margalit* clearly states that the device is "analogous to a memory smart card." *See* col. 4, ll. 21-22. (Examiner is concerned whether a "smart card" and a "Smart Card" mean the same thing. Appellants respectfully submit that a skilled artisan would understand "smart card" or "Smart Card" to be a term-of-art in the relevant field and whether it has capital letters to be irrelevant.) As discussed earlier in this paper, given that (i) typically the amount of the information on a memory smart card is very small (up to only 1 KiloByte) because of such memory smart card's very limited storage capacity at the time of the claimed invention (*see* para. 21 on p. 10 of *Hyde Affidavit*) and (ii) *Margalit*'s disclosure of a low-speed (1.5 Megabits per second) USB interface component CY7C63001A consistent with the very limited storage capacity in a smart card (*see* para. 22 on pp. 10-11 of *Hyde Affidavit*; *see also* Figures 3 and 4 of *Margalit*),[11] a skilled artisan would understand *Margalit* is not intended to handle or to operate with the kind of storage capacity at least comparable to that of a magnetic disk or CD. A skilled artisan would expect such kind of storage capacity to require a USB controller operating at its full speed 12 Megabits per second, such as that of the D12 part disclosed in Appellants' application, as oppose to its low speed 1.5 Megabits per second, such as the CY7C63001A part disclosed in *Margalit*. *See* paras. 20-21 on p. 10 of *Hyde Affidavit*.

As a result, the *Margalit* "key" device contains neither an integrated USB plug under the USB Specification, nor a USB control component having the required capability, nor a

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[11] Examiner fails to explain the relevance of his statements that "it would take about 8 seconds . . . to transfer enough data to fill the entire 1.44 MB floppy disk which Appellants regard as having sufficient capacity and that "this is too slow as to be unfit for Appellants' undisclosed purposes."

memory having the sufficient capacity to operate as an alternative to a magnetic disk or CD, as claimed in the Appellants' application. In addition, as discussed before, *Margalit*'s small memory would be wholly inconsistent with the division of such already very small memory into a plurality of zones. Hence, there would be no motivation for a skilled artisan to combine *Margalit* and *Jha* to create multiple zones in the memory as those in claim 29.

D. Secondary Consideration

Appellants respectfully submit that none of the cited art anticipates Appellants' claimed invention. As a result, at best Examiner has raised an issue of obviousness in his prior-art based rejections. Hence, all of the evidence regarding secondary consideration set forth by Appellants is relevant.

In addition, neither the manual switch nor the unique password to access zones in the memory cited by Examiner, alone or in combination with any of the other cited art, would render any of the claims obvious because a skilled artisan would not find it obvious to combine the cited references in the manner proposed by Examiner. The reason is that a skilled artisan would not add such switch or password zones to a portable storage device with an integrated USB plug for direct coupling to a host computer capable of serving as an alternative to a magnetic disk or CD.

(11) CONCLUSION

Appellants respectfully submit that claims 22 – 30 are fully supported by the specification as filed and are patentable over the cited art of record. As such, early notification of allowance of claims 22 – 30 is earnestly requested.

Respectfully submitted,

Dated: September 12, 2007

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APPENDIX A: CLAIMS APPENDIX

22. A unitary portable data storage device which can be directly plugged into a universal serial bus (USB) socket of a computer and which is operative to function as an alternative to a magnetic disk or compact disk (CD), and which is capable of storing software for installation to the computer or of receiving and storing user's data present in the computer, the unitary portable data storage device comprising:

a USB plug integrated into the unitary portable data storage device without an intervening cable capable of coupling the unitary portable data storage device directly to a USB socket on a computer;

a single interface, said interface allowing the unitary portable data storage device to communicate via the USB protocol and being coupled to the USB plug;

a non-volatile solid-state memory, said memory being non-removable from the unitary portable data storage device and having sufficient capacity to enable the unitary portable data storage device to serve as an alternative to a magnetic disk or CD; and

a memory controller, the memory controller being coupled between the interface and the memory to control the flow of data between the memory and the USB plug in a manner to enable the unitary portable data storage device to serve as an alternative to a magnetic disk or CD.

23. A unitary portable data storage device according to claim 22, wherein the memory controller is non-removable from the unitary portable data storage device.

24. A unitary portable data storage device according to claim 22, wherein the non-volatile solid-state memory is a flash memory.

25. A unitary portable data storage device according to claim 22, further comprising a manually operated switch movable between a first position in which writing of data to the memory is enabled, and a second position in which writing of data to the memory is prevented.

26. A unitary portable data storage device according to claim 22, wherein the memory controller comprises a micro-controller.

27. A unitary portable data storage device according to claim 26, wherein the micro-controller includes a read-only memory which stores a program to control the operation of the micro-controller.

28. A unitary portable data storage device according to claim 22, wherein the unitary portable data storage device is sufficiently compact to maximize portability.

29. A unitary portable data storage device according to claim 22, wherein the non-volatile solid-state memory is divided into a plurality of zones.

30. A unitary portable data storage device according to claim 29, wherein one or more of said plurality of zones require a unique password for access.

APPENDIX B: EVIDENCE APPENDIX

1. **Affidavit of John Hyde under 37 CFR 1.132**

2. **Affidavit of Yongmin Kim under 37 CFR 1.132**

3. **International Application Publication No. WO 01/61692 A1 (Application No. PCT/SG00/00029)**

*** The above documents have been attached to the Appeal Brief filed on April 18, 2007. ***

APPENDIX C: RELATED PROCEEDINGS APPENDIX

NONE.

APPENDIX D: TERMINAL DISCLAIMER

See the attached document on the next page.